

## **REMARKS/ARGUMENTS**

### **I. General Remarks and Status of the Claims.**

Claims 1-8, 10-32, and 34-47 remain pending in this application. Claims 9 and 33 have been cancelled herein. Claims 1 and 25 are currently amended herein.

Additionally, claims 48-94 have been cancelled herein in response to a telephone restriction requirement imposed by the Examiner. In a telephone conversation with the Examiner, Applicants provisionally elected claims 1-47 for prosecution on the merits. Applicants hereby confirm the provisional election. Moreover, Applicants reserve the right to present claims 48-94 in one or more divisional applications.

### **II. Objections to the Specification.**

The Examiner has objected to the specification on the grounds that the abstract of the disclosure contains the term “the present invention.” (Office Action at 3.) Applicants have amended the abstract accordingly, and respectfully request that the objection be withdrawn.

### **III. Remarks Regarding the Rejection of Claims 1-8, 10-32, and 34-47 Under 35 U.S.C. § 102**

#### **A. Rejection of Claims 1-8, 14-17, and 20-23 As Anticipated by U.S. Patent No. 5,464,060 to Hale et al (hereinafter, “*Hale*”).**

Claims 1-8, 14-17, and 20-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Hale*. The Examiner has stated:

Hale et al. discloses a method that includes a method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising cement, a strength-enhancing lost circulation material, and water; placing the cement composition into a subterranean formation; and allowing the cement composition to set. With respect to the depending claims, the reference teaches the limitations as claimed.

(Office Action at 4.) Applicants respectfully traverse, and submit that *Hale* has not been shown to disclose or suggest every element recited in the subject claims as required to anticipate the claims under 35 U.S.C. § 102(b). *Manual of Patent Examining Procedure* § 2131 (2004) (hereinafter “MPEP”).

In particular, amended independent claim 1 recites a method of using a strength-enhancing lost circulation material to reduce the loss of cement composition in a subterranean formation, and further includes the limitation of “reducing the loss of circulation of the cement composition using the strength-enhancing lost circulation material of sufficient size to reduce the loss of circulation of the cement composition.” Applicants respectfully submit that the Examiner has not shown *Hale* to disclose or suggest this limitation. In particular, the Examiner has not shown *Hale* to disclose a method of using a strength-enhancing lost circulation material to reduce the loss of cement composition in a subterranean formation, nor has the Examiner identified any specific component of the compositions taught by *Hale* as constituting a strength-enhancing lost circulation material. Accordingly, absent an identification by the Examiner of any specific disclosure in *Hale* of a strength-enhancing lost circulation material, much less a disclosure of “reducing the loss of circulation of the cement composition using the strength-enhancing lost circulation material of sufficient size to reduce the loss of circulation of the cement composition” as required by Applicants’ independent claim 1, Applicants respectfully assert that *Hale* has not been shown to disclose or suggest every element of amended independent claim 1.

Therefore, Applicants respectfully submit that independent claim 1, and the claims dependent therefrom, have not been shown to be anticipated by *Hale*. Accordingly, Applicants respectfully request the timely issuance of a Notice of Allowance for these claims.

**B. Rejection of Claims 1-8, 10-32, and 34-47 As Anticipated by U.S. Patent No. 6,689,208 to Brothers (hereinafter, “*Brothers*”).**

Claims 1-8, 10-32, and 34-47 stand rejected claims under 35 U.S.C. § 102(e) as being anticipated by *Brothers*. With respect to claim 1, the Examiner states:

Brothers’208 discloses... a method that includes a method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising cement, a strength-enhancing lost circulation material, and water; placing the cement composition into a subterranean formation; and allowing the cement composition to set. With respect to the depending claims, the reference teaches the limitations as claimed, including vitrified shale.

(Office Action at 5.) With respect to claim 25, the Examiner states:

[Brothers] discloses a method that includes a method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising cement, vitrified shale, and water; placing the cement composition into a subterranean formation; and allowing the cement composition to set. With respect to the depending claims, the reference teaches the limitations as claimed.

(Office Action at 5.) Applicants respectfully traverse and submit that *Brothers* has not been shown to disclose or suggest every element recited in the subject claims as required to anticipate the claims under 35 U.S.C. § 102(e). MPEP § 2131 (2004).

Amended independent claim 1 recites a method of using a strength-enhancing lost circulation material to reduce the loss of cement composition in a subterranean formation, and further includes the limitation of “reducing the loss of circulation of the cement composition using the strength-enhancing lost circulation material of sufficient size to reduce the loss of circulation of the cement composition.” Applicants respectfully submit that the Examiner has not shown *Brothers* to disclose or suggest this limitation. In particular, the Examiner has not shown *Brothers* to disclose a method of using a strength-enhancing lost circulation material to reduce the loss of cement composition in a subterranean formation. Furthermore, *Brothers* has not been shown to teach or suggest reducing the loss of circulation of the cement composition using the strength-enhancing lost circulation material of sufficient size to reduce the loss of circulation of the cement composition. Though *Brothers* teaches the use of an unhydrated cement comprising hydrated lime and vitrified shale, *see Brothers*, 2:8-11, Applicants note that in *Brothers*, the vitrified shale actually constitutes an integral part of the cementitious material that is present in the cement composition; in contrast, Applicants’ invention contemplates the use of vitrified shale (and other strength-enhancing lost circulation materials) as an additive to a cement composition that comprises a separate cementitious material. The Examiner has not shown that *Brothers* teaches the use of vitrified shale in an amount sufficient to both (i) combine with hydrated lime and water to form a cementitious material and also (b) enhance the strength of the cement composition and reduce the loss of circulation of a cement composition. Nor has the Examiner identified any other component of the cement compositions of *Brothers* that constitutes a strength-enhancing lost circulation material. Accordingly, *Brothers* has not been shown to disclose or suggest every element of amended independent claim 1.

Amended independent claim 25 recites the limitation of “permitting the vitrified shale to reduce the loss of fluid into the subterranean formation.” Applicants respectfully submit

that the Examiner has not shown *Brothers* to disclose or suggest this limitation. In this regard, Applicants note that *Brothers* discloses the use of an unhydrated cement comprising hydrated lime and vitrified shale, *see Brothers*, 2:8-11; accordingly, *Brothers* teaches combining vitrified shale and hydrated lime with water so as to form a cementitious component. *See id.* Applicants noted above that in *Brothers*, the vitrified shale actually constitutes an integral part of the cementitious material that is present in the cement composition; in contrast, Applicants' invention contemplates the use of vitrified shale (and other strength-enhancing lost circulation materials) as an additive to a cement composition that comprises a separate cementitious material. The Examiner has not shown that *Brothers* teaches the use of vitrified shale in an amount sufficient to both (i) combine with hydrated lime and water to form a cementitious material and also (b) enhance the strength of the cement composition and reduce the loss of circulation of a cement composition. Accordingly, *Brothers* has not been shown to disclose or suggest permitting vitrified shale to reduce the loss of circulation of cement composition into the subterranean formation, and thus has not been shown to disclose or suggest every element of amended independent claim 25.

Additionally, both independent claims 1 and 25 recite that the cement composition comprises a cement that "is selected from the group consisting of Portland cements, pozzolana cements, gypsum cements, soil cements, calcium phosphate cements, high alumina content cements, silica cements, or high alkalinity cements." In this regard, Applicants note that *Brothers* discloses cement compositions that comprise cements comprising vitrified shale and hydrated lime. *See Brothers*, 2:8-11, 2:21-48 and Examples 1-2. The Examiner has not shown the cements used in the cement compositions of *Brothers* to constitute cements that are selected from the group consisting of Portland cements, pozzolana cements, gypsum cements, soil cements, calcium phosphate cements, high alumina content cements, silica cements, or high alkalinity cements, as required by Applicants' independent claims 1 and 25.

Therefore, Applicants respectfully submit that independent claims 1 and 25, and the claims dependent therefrom, have not been shown to be anticipated by *Brothers*. Accordingly, Applicants respectfully request the timely issuance of a Notice of Allowance for these claims.

**C. Rejection of Claims 1-8, 10-32, and 34-47 As Anticipated by U.S. Patent Application Publication No. 2004/0171499A1 (hereinafter, “*Ravi*”).**

The Examiner has rejected claims 1-8, 10-32, and 34-47 under 35 U.S.C. § 102(e) as being anticipated by *Ravi*. With respect to claim 1, the Examiner states:

*Ravi et al.* discloses... a method that includes a method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising cement, a strength-enhancing lost circulation material, and water; placing the cement composition into a subterranean formation; and allowing the cement composition to set. With respect to the depending claims, the reference teaches the limitations as claimed, including vitrified shale.

(Office Action at 5-6.) With respect to claim 25, the Examiner states:

[*Ravi*] discloses a method that includes a method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising cement, vitrified shale, and water; placing the cement composition into a subterranean formation; and allowing the cement composition to set. With respect to the depending claims, the reference teaches the limitations as claimed.

(Office Action at 6.) Applicants respectfully traverse and submit that *Ravi* has not been shown to disclose or suggest every element recited in the subject claims as required to anticipate the claims under 35 U.S.C. § 102(e). MPEP § 2131 (2004).

In particular, amended independent claim 1 recites the limitation of “reducing the loss of circulation of the cement composition using the strength-enhancing lost circulation material of sufficient size to reduce the loss of circulation of the cement composition.” Applicants respectfully submit that the Examiner has not shown *Ravi* to disclose or suggest this limitation. In this regard, Applicants note that *Ravi* discloses the use of “a portion of elastic particles” to avoid the loss of circulation of the cement composition. *See Ravi*, at [0011]-[0012]. The Examiner has not shown that these elastic particles constitute strength-enhancing lost circulation materials. Indeed, Applicants note that in the portion of *Ravi* that describes suitable lost circulation materials, [0018]-[0024], vitrified shale does not appear to be disclosed. Moreover, though *Ravi* subsequently includes vitrified shale in a list of additives that optionally may be present in the cement compositions disclosed therein, *see id.* at [0027], the Examiner has not shown *Ravi* to disclose the step of reducing the loss of circulation of the cement composition

using the strength-enhancing lost circulation material (*e.g.*, vitrified shale) of sufficient size to reduce the loss of circulation of the cement composition, as required by Applicants' independent claim 1. Accordingly, *Ravi* has not been shown to disclose or suggest every element of amended independent claim 1.

Amended independent claim 25 recites the limitation of "permitting the vitrified shale to reduce the loss of fluid into the subterranean formation." Applicants respectfully submit that the Examiner has not shown *Ravi* to disclose or suggest this limitation. As noted above, *Ravi* includes vitrified shale in a list of additives that optionally may be present in the cement compositions disclosed therein, but the Examiner has not shown *Ravi* to disclose the step of permitting the vitrified shale to reduce the loss of fluid into the subterranean formation, as required by Applicants' claim 25. In this regard, Applicants note once more that *Ravi* expressly discloses that "elastic particles" are used to avoid the loss of circulation of the cement composition. *See Ravi*, at [0011]-[0012]. Applicants further note that in the portion of *Ravi* that describes suitable lost circulation materials, [0018]-[0024], vitrified shale does not appear to be disclosed; rather, *Ravi* subsequently includes vitrified shale in a list of additives that optionally may be present in the cement compositions disclosed therein, *see id.* at [0027], but has not been shown to disclose the step of permitting the vitrified shale to reduce the loss of fluid into the subterranean formation, as required by Applicants' independent claim 25. Accordingly, *Ravi* has not been shown to disclose or suggest every element of amended independent claim 25.

Therefore, Applicants respectfully submit that independent claims 1 and 25, and the claims dependent therefrom, have not been shown to be anticipated by *Ravi*. Accordingly, Applicants respectfully request the timely issuance of a Notice of Allowance for these claims.

**SUMMARY AND PETITION FOR TWO-MONTH EXTENSION OF TIME  
TO FILE THIS RESPONSE**

In light of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding objections and rejections. Applicant further submits that the application is now in condition for allowance, and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicant's Response to this Office Action was due on December 12, 2005. Accordingly, Applicant has included herein a Petition for Two-Month Extension of Time to File this Response, along with check no. 954224 for the fee of \$450.00 under 37 C.F.R. 1.136(a). The Commissioner is hereby authorized to charge Baker Botts L.L.P. Deposit Account No. 02-0383 (Order Number 063718.0313) for any underpayment, or to credit same with any overpayment of fees, in association with this filing.

Applicant believes that there are no additional fees due in association with this filing of this Response. However, the Commissioner is authorized to debit Baker Botts L.L.P. Deposit Account No. 02-0383, Order No. 063718.0313, for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,



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